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## NEW TERTIARY FOSSILS FROM RED BLUFF, MISSISSIPPI.

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The fossil-bearing stratum designated by Dr. E. W. Hilgard as the "Red Bluff group," occurs in Wayne County, Mississippi, near Red Bluff station, and is exposed on the banks of the Chickasawharg River. The fossiliferous stratum is four feet thick and contains beautifully preserved specimens imbedded in a greenish clay. Through the kindness of Prof. W. H. Dall I have had an opportunity to examine the collections of the National Museum, which were obtained here by Mr. F. Burns and others and with a series in my own cabinet have been enabled to list 135 species from this bed. Of these 26 are peculiar; 25 are found also in the beds at Jackson, Miss.; 54 occur also at Vicksburg, and 30 are also common to Jackson and Vicksburg. This bed, therefore, should be classed with the Vicksburg series. The following are described as new:

*Mitra lintoidea* n. sp. Pl. 4, fig. 1.

Shell fusiform, whorls nine, somewhat turritid, densely but coarsely longitudinally ribbed, a transverse impressed line behind the suture gives the upper whorls the appearance of being beaded; aperture narrow, elongate; outer lip sharp, slightly incurved, striated within, labium four plaited; canal open, rather short, curved, a number of impressed lines showing upon the lower part of body whorl. Alt. 27 mm.; diam. 8 mm.

This species differs from *Fusimitra cellulifera* Con. by its lack of

impressed revolving punctures and by being broader and much heavier.

The ribs are almost obsolete in young specimens. Type is in my collection. Examples in National Museum.

*Cypræa Dalli* n. sp. Pl. 4, fig. 2, 2 a.

Shell ovate, moderately elevated, surface highly polished, crossed above by a number of lines not closely set, dividing the surface into a series of facets, base ventricose; labrum very much thickened, profoundly striated but the striations do not extend up over the whole surface. Teeth on outer lip alternate. The smaller ones half the length of the others; aperture narrowed in some specimens in the centre, in others regular and strongly denticulated. Length 15 mm.; width 12 mm.; alt. 9 mm.

This shell is also found at Jackson, Miss. It resembles *C. linteola* Con., and has been considered as that species. It is however larger, with a more thickened labrum on which the striations do not reach the body of the shell as in Conrad's species, but stop half way; the surface of this shell is very different. In *C. linteola* the surface is completely covered with close-set, very fine lines, while this species has but few, and they are not impressed, some specimens being smooth. The type retains some color, showing the shell to be chocolate brown above with the lip white; *C. linteola* Con. is figured in my *Preliminary Report*, Pl. V, fig. 2, p. 32, 1886.

Conrad's original description contains a misprint which seems to have been perpetuated in later publications. It should read "with *fine* approximate equal impressed lines," instead of "*four* . . lines." Type in National Museum; examples in my collection.

*Pleurotoma Clarkeana* n. sp. Pl. 4, fig. 3.

Shell rather solid, fusiform, whorls about nine, spire smooth (?), whorls with about eleven strongly raised and rounded ribs crossed by coarse revolving lines; somewhat alternate. The finer lines between often being double, especially upon the body whorl. Suture appressed, bordered by a corded thread, and this in turn by a concave space. Aperture oblong-oval. Canal short. Sinus semi-circular, and well up in the aperture. Length 31 mm.; breadth 11 mm.

*Murex (Pteronotus) Burnsii* n. sp. Pl. 4, fig. 4, 4a.

Shell large, with three foliated varices, whorls nine. Nucleus pointed, smooth; whorls convex, appressed at suture, whorls fol-

lowing the nucleus have two ribs on centre, each rib bearing a node which is equidistant from the foliations; three continuous fin-like varices continued from apex, which revolve in descending, edges of varices dentate. Body whorl with about thirteen distant spiral raised ribs, the two on the periphery bearing a node each between the foliations. Aperture elongate-oval. Outer lip having internally seven plications, inner lip smooth; canal rather long, almost closed posteriorly, widening anteriorly, and bent upwards. Canal of preceding aperture persistent. Alt. 65 mm.; diam. 33 mm.

This elegant *Pteronotus* is described from the unique example belonging to the National Museum. Named in honor of its discoverer, Mr. F. Burns, of the U. S. National Museum.

*Cerithium serratoides* n. sp. Pl. 4, fig. 5.

Shell elongate; suture linear; whorls ornamented with transverse ribs, which are moderate near the suture, but suddenly become enlarged and spinous at the intersection of a spiral near the middle of each whorl; a couple of fine spiral lines occur between the spines and preceding whorl; also a single spiral line just below the suture. Whorls slightly shouldered.

Specimen figured has lost its apex and aperture, but is so evidently a serrate *Cerithium* that I have concluded to describe it.

Length of part figured is 36 mm.

Type in National Museum. Example in my cabinet.

*Latirus indistinctus* n. sp. Pl. 4, fig. 6.

Shell fusiform, whorls nine, rounded; apical whorl smooth, the remaining ones transversely ribbed, crossed by raised lines that on the body whorl are alternately coarse and fine; suture distinct, whorls appressed to it anteriorly. Canal long, twisted strongly to the right and then to the left. Striations continue to the end of canal. Aperture oblong-oval, toothed posteriorly and shouldered anteriorly. Outer lip striated internally; inner lip covered with a thin callus, definitely delineated and running to end of canal. No teeth on the inner lip, but some of the striations show through the callus. Alt. 42 mm.; diam. 14 mm.

This handsome species is strongly Fusoid in appearance, and does not possess plications on the inner lip like most of the genus, but it evidently belongs there from its other characters.

Type in the National Museum. One example in my collection.